



Technical Consultation, Data Analysis and
Litigation Support for the Environment



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[Matthew F. Hagemann, P.G., C.Hg.

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Regulatory Compliance
CEQA Review
Litigation Support and Testifying Expert

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certification:

California Professional Geologist

California Certified Hydrogeologist

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – present;
- Senior Environmental Analyst, Komex H2O Science, Inc (2000 -- 2003);
- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);

- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of numerous environmental impact reports under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions and geologic hazards.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.
- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.
- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nationwide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

In Fall 2010, Matt taught Physical Geology (lecture and lab) to students at Golden West College in Huntington Beach, California.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and Hagemann, M., 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells.

Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

- Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.
- Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.
- VanMouwerik, M. and Hagemann, M.F. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.
- Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.
- Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.
- Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.
- Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.
- Hagemann, M. F., Fukunaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.
- Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.
- Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.
- Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.
- Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Geologist licensing examination, 2009-2010.



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April 18, 2011

Michael Lozeau
Lozeau | Drury LLP
410 12th Street, Suite 250
Oakland, CA 94607

Subject: Comments on the Homewood Mountain Resort Ski Area Draft Environmental Impact Report

Dear Mr. Lozeau:

I have reviewed the January 2011 Draft Environmental Impact Report (DEIR) for the Homewood Mountain Resort Ski Area Master Plan CEP Project (HMR-CEP) for impacts associated with stormwater quality, water supplies, groundwater quality impacts, and land coverage. The 1,253-acre project area is located on the west shore of Lake Tahoe, approximately six miles south of Tahoe City in Placer County, California. The project area is bound by State Route 89 to the east, Ellis Peak to the southwest, and Blackwood Ridge to the north. The Proposed Project includes the redevelopment of the existing ski area north base facility, the residential base area to the south, and development of a mid-mountain lodge and beginner ski area.

Proposed stormwater treatment for HMR Community Enhancement Program is ineffective in reducing fine particulates

In 1968, Lake Tahoe clarity was measured to a depth of 102.4 feet when UC Davis researchers first measured the lake. The clarity of the lake has steadily decreased and by 2009, the lake was clear to an average depth of only 68.1 feet.¹ The RWQCB has stated that Lake Tahoe's clarity problems are related to very fine sediment (<20 microns) discharge.² Other studies have shown that the smallest particles

¹ <http://terc.ucdavis.edu/research/clarity.html>

² http://www.google.com/url?sa=t&source=web&cd=6&ved=0CD0QFjAF&url=http%3A%2F%2Fwww.swrcb.ca.gov%2Fwater_issues%2Fprograms%2Ftmdl%2Fflake_tahoe%2Fdocs%2Fpresentations%2Ffocusteamintro09101107.ppt&rct=j&q=lake%20tahow%20clarity%20microns&ei=gl2STfqyJHXiAKIzfXuAQ&usq=AFQjCNGxUKgw7OIcwZXA5lpznvd6IV4Nsg&sig2=i9a-VCo5Y0s4q13aUpEGgA

(less than 8 microns) have the biggest impact.³ Up to 72% of the less than 20-micron sediment load to Lake Tahoe originates from the urban upland sources, including runoff from roadways.⁴

The DEIR outlines a HMR-CEP project to provide treatment for stormwater runoff generated from the contributing areas along SR 89 in the vicinity of the Project. The project will involve the installation of two water quality treatment basins and the installation of a Contech Stormfilter (or similar technology) for treatment of fine sediment removal. The Contech Stormfilter system uses a cartridge media filtration system.

The DEIR states that the Contech system is to serve as secondary treatment for the removal of fine sediments down to 15 microns. Our review of the Contechs literature shows that the claim of fine particulate removal is based on one lab study under controlled conditions with a discharge of 7.5 gal/min.⁵ The Contechs literature states:

Field conditions are notoriously variable with regard to TSS characteristics and sampling methods, and comparison of this experiment to field-derived data will be accordingly affected. Laboratory studies are beneficial for the evaluation of system performance potential as part of the product development or system comparison process.

The flows in the controlled Contech lab experiment are dwarfed by actual conditions predicted in the DEIR. The DEIR estimates flows to the system as follow: 10-year event = 3.54 cfs, 25-year = 4.28 cfs, 100-year = 5.39 p. 15-92). These flows equal 1,589 gal/min to 2,419 gal/min, well in excess of the 7.5 gal/min discharge in the controlled lab experiment that is cited in the DEIR.

The DEIR provides no estimates of how the Contech system will work under actual field conditions with predicted 10-, 25- and 100-year events in reducing fine particulate loading to Lake Tahoe. The DEIR should be revised to include real world examples of Contech installations, preferably in the Tahoe basin, and to provide data to demonstrate effective reduction of fine particulates.

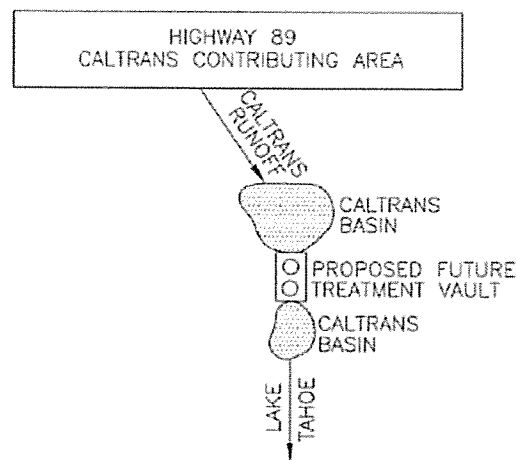
If data cannot be provided to demonstrate reduction of fine particulates, redesign of the system should be considered in a revised DEIR. The system, as proposed, is schematically presented below.

³ <http://californiaagriculture.ucanr.org/landingpage.cfm?article=ca.v060n02p49&fulltext=yes>

⁴ <http://www.fs.fed.us/psw/partnerships/tahoescience/documents/WigartSNPLMARound9-perliterevised.pdf>

⁵ http://www.contech-cpi.com/DesktopModules/Bring2mind/DMX/Download.aspx?Command=Core_Download&EntryId=2821&PortalId=0&TabId=144

Figure 15-15. Off-Site EIP Project Design Schematic



To increase the HMR-CEP effectiveness, consideration should be given in a revised DEIR to routing stormwater to an infiltration gallery after treatment by the Contechs system, in a fashion similar to the treatment train that is proposed for stormwater treatment for the project. Discharge to a basin, especially during high-flow conditions will not be as effective in reducing TSS.

Water Supply Assessment is inadequate

A Water Supply Assessment was prepared for the project and included as an attachment. The Water Supply Assessment states (p. 1):

This Assessment was not prepared to act as a formal Senate Bill (SB) 610 Water Supply Assessment, but it does comply with the requirements of a SB 610 Water Supply Assessment.

The DEIR states that as mitigation (Measure PSU-1a), a SB 610-compliant Water Supply Assessment will be prepared, but not until after certification of the DEIR. It is our opinion that this is deferred mitigation and that the Water Supply Assessment should be included in a revised DEIR.

A SB 610 Water Supply Assessment requires the explicit identification of existing and anticipated water supply entitlements and water service contracts. The Water Supply Assessment that was attached to the DEIR does not provide any service contracts for the water or "will serve" letters. Instead the Water Supply Assessment describes very uncertain sources of water that will be needed by the project from two potential sources: the Tahoe City Public Utility District and the Madden Creek Water Company. The Water Supply Assessment provides only "hypothetical scenarios" where: (1) the Tahoe City Public Utility District would be the sole water provider for the entire project area while stating that such a scenario has not been presented to the Tahoe City Public Utility District; and (2) the Madden Creek Water Company and the Tahoe City Public Utility District would supply water to certain portions of the project (again, no documentation was provided that this proposal has had any consideration by either the Madden Creek Water Company or the Tahoe City Public Utility District). It is also important to note that no data is available on the current Madden Creek Water company supply except that they are

meeting the current demand of 160 connections that that “it can be assumed that the water supply is sufficient to produce 134 acre-feet/year” (DEIR, p. 15-27).

The mitigation that is provided (PSU-1a) is inadequate, stating only that the Project applicant shall prepare a final Water Supply Assessment to identify the quantity and source of domestic and raw water to serve the Project. The DEIR needs to be revised to include documentation of the sources of water that will be supplied to the project. The documentation should include contracts or documentation of “will serve” letters with the Madden Creek Water Company or the Tahoe City Public Utility District that provides the following information:

- the amount of the water that can be provided by the water supply companies
- the incorporation of the project demand into the water supply company planning documents
- Water rights to the water that will provided to the project
- Identification of other projects that may compete for the water.

Vertical separation is inadequate for proposed infiltration galleries and may impact water quality

The stormwater infiltration galleries, proposed as the final step for treatment of Project stormwater, are designed to maximize separation between bottom of galleries and the seasonal high water table. TRPA Code of Ordinances Section 25.5.A requires that the bottom of infiltration facilities be a minimum of 1 foot above the seasonal high water table. Additionally, in “any stormwater infiltrating areas that may have less than two (2) feet of separation to the seasonal high water table, the stormwater being infiltrated must meet TRPA Code of Ordinances Chapter 81 in regard to surface water discharge standards and/or be redesigned to provide the required two (2) feet separation.” (DEIR, p. 15-97).

According to the DEIR, the stormwater infiltration galleries are designed to maintain at least 1.5 to 2 feet of separation between the bottom of the galleries and the seasonal high water table as measured in 2006, 2007 and 2008. However, the DEIR states (p. 15-80):

because of the complexity of the North Base area and its proximity to Lake Tahoe, TRPA Soil Hydrologic approval conditions require final stormwater systems designs to maintain a minimum two (2) foot separation between bottom of galleries and the seasonal high water table.

Meeting the two foot separation will be achieved in all areas except North-1, according to the DEIR (p. 15-97). In this area, the TRPA Code requirements must be met for surface water discharge. Chapter 81 of the TRPA Code sets forth the following discharge limits that would be applicable to water that would be infiltrated under the project as described in the DEIR (p. 15-29):

TRPA Surface Water Discharge Limits

Parameter	Unit	Surface Runoff Limits	
		Surface Discharge	Discharges to Groundwater
Turbidity	NTU	--	200
Suspended Sediment Concentration*	mg/L	250	--
Oil and Grease	mg/L	2	40
Dissolved Inorganic Nitrogen (NO ₂ +NO ₃ +NH ₃)	mg/L	0.5	--
Total Nitrogen	mg/L	--	5
Dissolved Phosphorus	mg/L	0.1	--
Total Phosphorus	mg/L	--	1
Dissolved Iron	mg/L	0.5	--
Total Iron	mg/L	--	4

Source: TRPA Code or Ordinances Chapter 81

The DEIR has also not adequately explained how these discharge limits will be met by water that is discharged to shallow groundwater in the infiltration galleries at depths that will not meet minimum vertical separation requirement.

Furthermore, the DEIR has not done an adequate job in detailing how the vertical separation is to be achieved in areas other than "North-1" especially during times of highest groundwater. For example, high groundwater was measured in the gravel parking lot located south of Sacramento Street at approximately 0.9 to 5 feet bgs. At 0.9 feet bgs, vertical separation of 2 feet will be impossible to achieve.

Mitigation (HYDRO-2a) is proposed in the DEIR for only one infiltration gallery, North-1, where the separation of the bottom to the seasonal high water table is estimated to be 1.5 feet during non-discharge and to 0.8 feet during discharge (DEIR, p. 15-97). Measure HYDRO-2a provides only for a process to gain TRPA approval in meeting the requirements of Code of Ordinances Chapter 81 for surface water discharge standards. This is deferred mitigation and does not ensure that approval can be met. The DEIR should be revised to include TRPA approval of the treatment train as proposed in the DEIR for North-1. The DEIR should also be revised to identify other areas where the vertical separation will not be achieved and how TRPA approval is to be met in those areas.

Groundwater will be daylighted during excavation

The Project will require excavation to depths greater than five feet and will result in interception of the groundwater table during construction at the North and South Base area (DEIR, p. 14-26). TRPA Code (Chapter 64, Section 64.7.B) prohibits excavations greater than five feet in depth or when there exists a reasonable possibility of interference or interception of a water table unless conditions can be met, including preparation of a report that demonstrates that no interference or interception of groundwater will occur as a result of the excavation, that no damage occurs to mature trees and that topography is maintained. If groundwater interception will occur, an excavation can be made per the TRPA Code if

measures are included in the project to maintain groundwater flows to avoid adverse impacts to vegetation and to prevent any groundwater or subsurface flow from leaving the Project area as surface flow.

The Proposed Project (Alternative 1) and Alternatives 3, 5 and 6 will require excavations for parking structures that exceed five feet based on building cross sections for the Proposed Project (Alternative 1) (DEIR, p. 14-73). The DEIR states (p. 14-74):

The maximum depth of excavation at the North Base area ranges from 29 to 32 feet bgs. The maximum depth of excavation will be approximately 17 feet below seasonal high groundwater levels measured in this area.

This statement contradicts the depth of seasonally high groundwater documented elsewhere in the DEIR, including (p. 14-17):

In the North Base paved parking lots, groundwater was measured at depths of 5.44 to 10.45 feet below ground surface (bgs), and seasonal groundwater as indicated by evidence of mottled soils was noted at depths of approximately 4.3 to 8 feet bgs. Historic water levels in monitoring wells were as high as 4.65 feet bgs (Kleinfelder 2010).

If the information on p. 14-17 is correct, the excavation in the North Base parking lot will extend a maximum of 27.7 feet below the seasonally high groundwater elevation, not 17 feet as stated on p. 14-74. The DEIR provides additional contradicting information about the depth of the water table interception, stating on p. 14-74:

The maximum depth of excavation at the South Base area ranges from 19 to 21 feet bgs. The maximum depth of excavation will be from 4 to 13 feet below seasonal high groundwater levels measured in this area. The estimated groundwater flow rates that will be intercepted by proposed retaining walls for the underground parking structures at the South Base area range from 1 to 11 gpm.

In the South Base area, the DEIR states that seasonally high groundwater was measured at depths as shallow as 0.97 feet below ground surface (p. 14-17); therefore, the maximum depth of excavation may be as great as 20.03 feet below high water levels.

Because the estimate of the maximum depth of water table interception does not consider highest water table conditions, calculations of the flow rates that would be intercepted by proposed retaining walls for the underground parking structures at the North Base and the South Base need to be recalculated and additional mitigation needs to be identified in a revised DEIR. Interception of shallow groundwater could cause discharge to surface water that would result in violations of the TRPA surface water discharge limits and which could constitute non-stormwater discharges during construction. Non-stormwater discharges are prohibited under the California General Construction Permit (Order 2009-0009-DWQ) unless authorized by the Regional Water Quality Control Board.

The mitigation is also inadequate (DEIR, p. 14-75):

The impact, however, remains significant because 1) the excavations exceeding five feet will intercept seasonal high groundwater during construction of proposed underground parking structures and requires mitigation to assure that intercepted groundwater does not leave the Project area as surface flow and 2) Placer County considers impacts from grading and earthwork potentially significant unless standard mitigation measures are applied, ensuring compliance with codified regulations to avoid and minimize construction-related impacts to soils. Long-term impacts and mitigations for interception of groundwater during project operations are analyzed in Chapter 15, Hydrology, Water Rights, Surface Water Quality and Groundwater.

Chapter 15 states only that a final BMP plan is to be submitted for approval by TRPA Stormwater Management Program staff (DEIR, p. 15-98). This is deferred mitigation. A revised DEIR should be prepared to identify impacts of the water table interception and any mitigation that would be necessary.

Improper consideration of land coverage

The Project applicant states it will conduct removal of no less than 500,000 square feet of existing land coverage under the Proposed Project (Alternative 1) and Alternatives 3, 5 and 6 (DEIR, p. 14-52). As part of that commitment, the applicant has removed disturbed roadways and has committed to further road removal.

The DEIR states that since 2006, approximately 19,000 linear feet of dirt access roads ranging from 7 to 18 feet in width have been treated and removed from within the Project area as part of sediment source control projects that removed and restored soft land coverage and disturbance associated with dirt access roads. The total restored area is reported to be 5.5 acres (DEIR, p. 15-7) or approximately 240,000 square feet. The recently removed land coverage and disturbance have not been banked by TRPA and are preliminary until approved. Approximately 25,000 linear feet of dirt access roads ranging from 7 to 18 feet in width have been identified for potential removal and restoration (DEIR, p. 14-52).

We have examined the locations of the removed and restored land coverage as identified in Figure 14-4. All photos and maps we used to prepare our analysis are included as Attachment 1. We have compared the locations of the roads to maps and aerial photos to determine if the roads were in existence as of February 10, 1972 in order to be qualified as restored land coverage under provisions of the TRPA Code, Chapter 20, Land Coverage Standards.⁶ The map we prepared, Figure 1, shows significant lengths of roadways that were not in existence as of February 10, 1972 or were not likely to be in existence as of that date. For those roads where land coverage has been removed in 2006 to 2009 (see DEIR, Figure 14-4), our analysis shows that Rainbow Ridge and Homeward Bound 0 to be nonexistent in February 1972 (Figure 1). These roadways represent approximately 4000 linear feet of coverage. According to the DEIR, Homeward Bound 0 received restoration on a total of 38,788 square feet. The DEIR doesn't state the area that received restoration for Rainbow Ridge; however the IERS report states that restoration was conducted over 48,300 square feet for Rainbow Ridge. On the basis of these figures, Homeward Bound 0 and Rainbow Ridge represent a total of 87,088 square feet of restoration, or approximately 36% of the 240,000 square foot area claimed as eligible for restoration credits. Our

⁶ <http://www.trpa.org/documents/docdwnlds/Ordinances/COCh20.pdf>

analysis shows that these road segments would not be eligible for banking because they were not in existence on February 10, 1972.

For those roads that are proposed for removal of land coverage (see DEIR, Figure 14-5), Road 8 and Road 16 were not in existence as of February 10, 1972. These roads are a combined 2400 linear feet and represent approximately 10% of the 25,000 linear feet of roadways that are proposed for restoration. If an average roadway width of 12.5 feet is used (roadway widths range from 7 to 18 feet, according to the DEIR on p. 14-20), these roadways represent 30,000 square feet of coverage.

Additionally, our analysis shows that a number of other roadways may not have been in existence as of February 10, 1972. The uncertainty stems from the dates of the photographs and the maps and the visibility of the roadways in those maps. For those roads where land coverage has been removed, our analysis shows Homeward Bound 1 may have been nonexistent in February 1972 (Figure 1).

Homeward Bound 1 is 300 feet in length and received treatment on 3,624 square feet, or about 2% of the area claimed as eligible for restoration credits. For those roads that are proposed for removal of land coverage, Road 10, Road 11, Road 15 and Road 17 may not have been in existence as of February 10, 1972. These roadways represent a combined 6600 linear feet and approximately 26% of the 25,000 linear feet of roadways identified for potential restoration.

In summary, according to our analysis, 36% of the area of the roadways where restoration has taken place is ineligible for banking because the roads were not in existence as of February 10, 1972. For those roadways that are being considered for land coverage banking, 10% were not in existence as of February 10, 1972 and 26% of the roadways identified for potential restoration may not have been in existence as of February 10, 1972. Because they were not present as of February 10, 1972, they are ineligible to be qualified as restored land coverage under provisions of the TRPA Code, Chapter 20, Land Coverage Standards.

A revised DEIR should be prepared to verify the existence of the roads of February 10, 1972 in areas already restored or in areas proposed for restoration. All roads not in existence as of that date should be eliminated from discussions regarding banking of land coverage. Instead, roads that have been restored should be included for credit for restoration of disturbed lands to meet TRPA goals.

Additionally, we have conducted an analysis of the North Base parking lot and have determined that the majority of the parking lot was not in existence as of February 10, 1972. Figure 2 shows an overlay of a map prepared on the basis of conditions that existed as of November 1971 (Attachment 2), arguably the same conditions that would have existed on February 10, 1972 given that the winter season would have prevented any further development.

Figure2 depicts two features that indicate the parking lot was not in existence in February 1972.

1. A roadway in the northern area of what is now the parking lot is shown to extend east/west to join with the highway. If the lot was in existence at the time, the roadway would be shown to empty into a parking area.

2. An area that would appear to be fenced extends west and south of the lodge toward the southern boundary of the site and to the highway to the east. This appears to be the extent of the parking area as of February 10, 1972.

The fenced area represents 29% of the area of the parking lot that was in existence as of 2005 and that is currently in existence. Therefore, 71% was not in existence as of February 10, 1972 and cannot be claimed as existing coverage.

Infiltration rates indicate areas not qualified for coverage

The TRPA Code defines coverage as “lands so used before February 10, 1972, for such uses as for the parking of cars and heavy and repeated pedestrian traffic that the soil is compacted so as to prevent substantial infiltration.” We have determined that roadways that were restored had substantial infiltration rates prior to restoration and are therefore not qualified as coverage. We have also determined that infiltration rates were not appreciably increased following restoration, again indicating that restored lands are not coverage under the TRPA code.

Actual infiltration rates “before and after” restoration were measured on only one road prior to conducting any treatment work. On Road 31, infiltration rates were reported as follows:

“Before and after treatment, approximately 56% of applied water was infiltrated.” (Oct. 2008 IERS Report, p. 32.)

On Road 31, the infiltration rate was not increased by treatment. No other before and after infiltration rates are provided in the IERS report.

Instead of relying on actual before and after infiltration rates, the IERS report uses cone penetrometer data in an attempt to demonstrate increased infiltration. The IERS report claims that an average 4.3 fold increase in depths of penetration shows increased infiltration rates (IERS Report, p. 34). However, for the Road 31 site (the only site with before and after infiltration data), the measured depths of penetrometer readings at the site increased three-fold after treatment yet infiltration rates stayed the same (see above). Therefore, penetrometer depths appear to be poorly correlated to infiltration rates and should not be relied upon as a measure of infiltration capacity.

Roadways that were restored had substantial infiltration rates prior to restoration activities and therefore do not qualify as coverage. Upper and lower segments of Wedding Road were measured for infiltration prior to any restoration work. The infiltration rate for these segments was 75 percent of applied water prior to any treatment (IERS Report, p. 34). This is a high rate of infiltration that would not meet the TRPA code requirement that lands had compacted soils “so as to prevent substantial infiltration.” Additionally, penetrometer data indicate refusal at less than 2 inches (IERS Report, p. 36) which does not correlate to the high infiltration rate that was measured.

The roadways that were restored appeared to readily infiltrate water prior to any restoration activities. According to the TRPA Code, these areas would not be eligible for restoration because substantial infiltration was occurring on these roadways at the time of restoration. Therefore, all roadways claimed

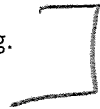
as coverage should be eliminated because the applicant has provided no data to show that infiltration was not substantially impaired prior to restoration.

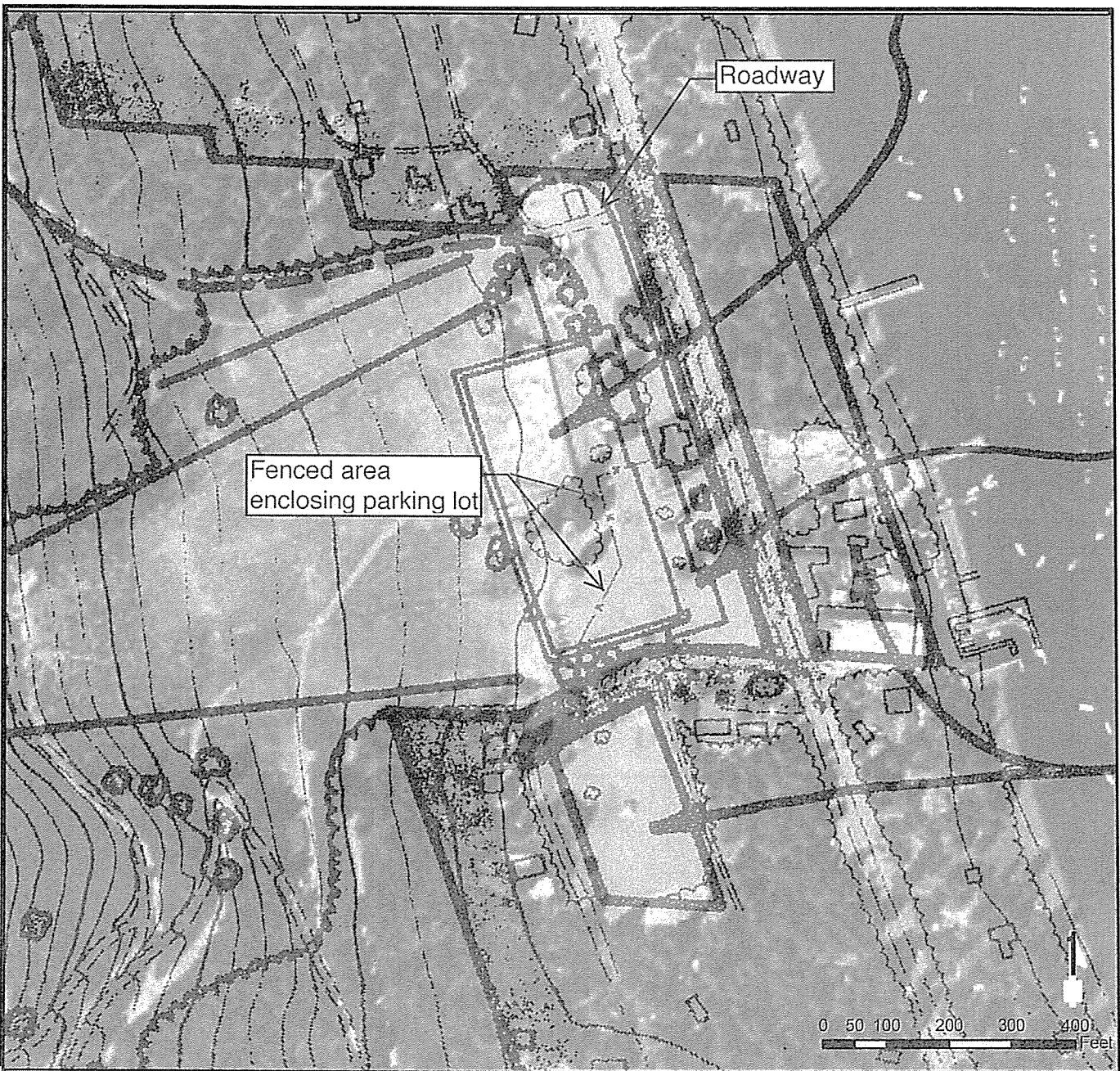
Finally, the use of a penetrometer to correlate to infiltration rates does not appear to be warranted on the basis of the data in the IERS report. A revised DEIR should be prepared to identify actual infiltration rates of all roadways that are currently proposed for restoration. The revised DEIR should identify road segments where infiltration is not substantial on the basis of actual infiltration data as areas that would be qualified for coverage and eliminate those areas where infiltration is substantial.

Sincerely,

A handwritten signature in cursive script, appearing to read "M Hagemann", written in black ink.

Matt Hagemann, P.G., C.Hg.





NOTES:

1. All locations are approximate.
2. 2005 DOQQ Orthographic Imagery obtained from CaSIL (the California Spatial Information Library).
3. Spatial data obtained from the Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package.
4. 1969 USGS Aerial Imagery obtained from Google Earth.

Project No.: Homewood Ski Resort			
Title: 2005 Orthographic Imagery and 1970-1971 Detailed Site Investigations Map, North Parking Lot			
	Project No.: 438	Drawn By: JAC	Figure: 2
	Approved: MH	Date: 04.13.2011	

SWAPE

Technical Consultation, Data Analysis and
Litigation Support for the Environment

Attachment 1



1969 Photo
Obtained from
Google Earth

Image Date: Jan 1, 1969

Image U.S. Geological Survey

10S 74490 67m E 43927 2.01m N elev 7138ft

©2010 Google

ESR 16509 4





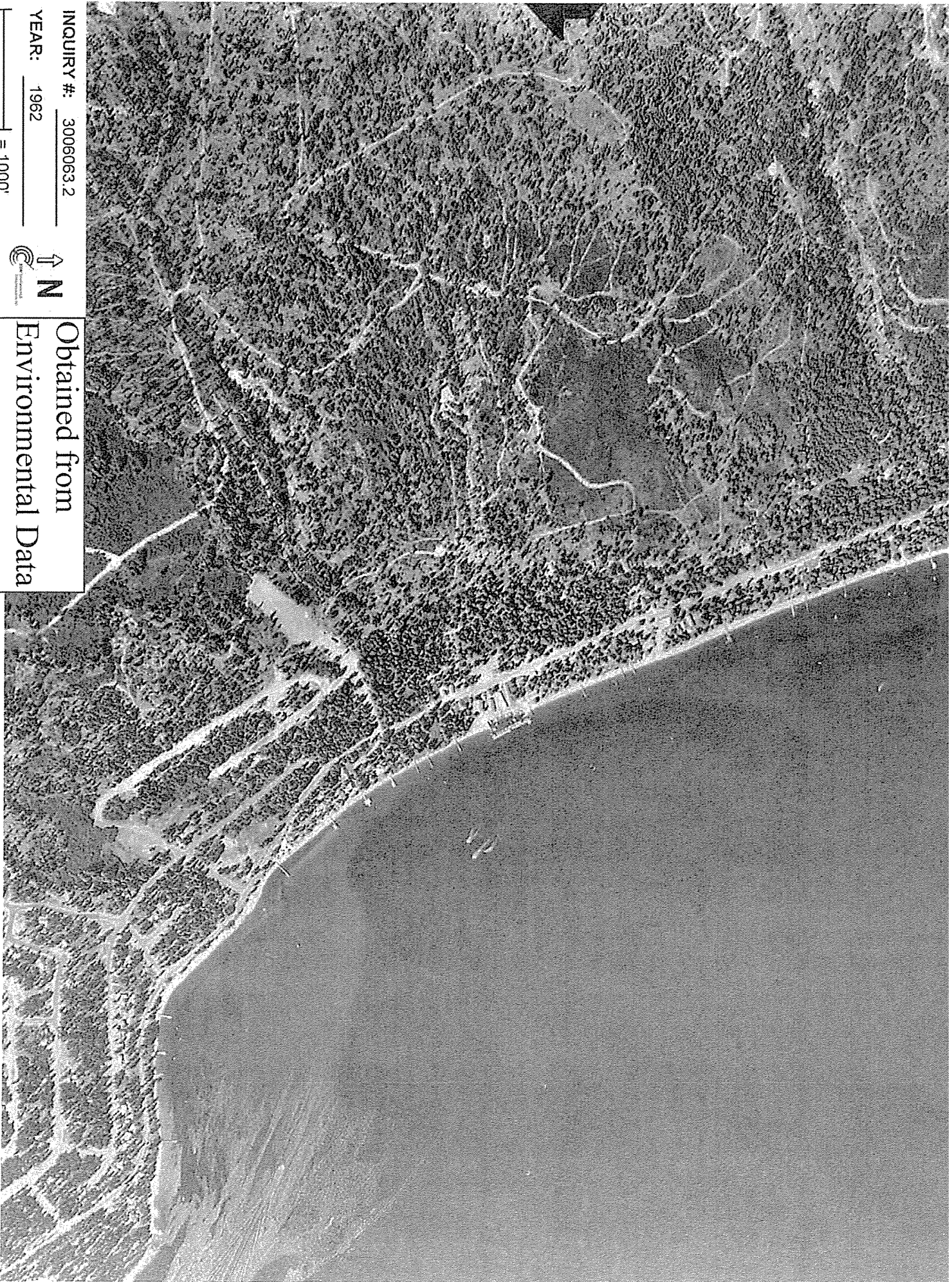
INQUIRY #: 3006063.2

YEAR: 1962

1" = 1000'



Obtained from
Environmental Data
Resources, Inc.



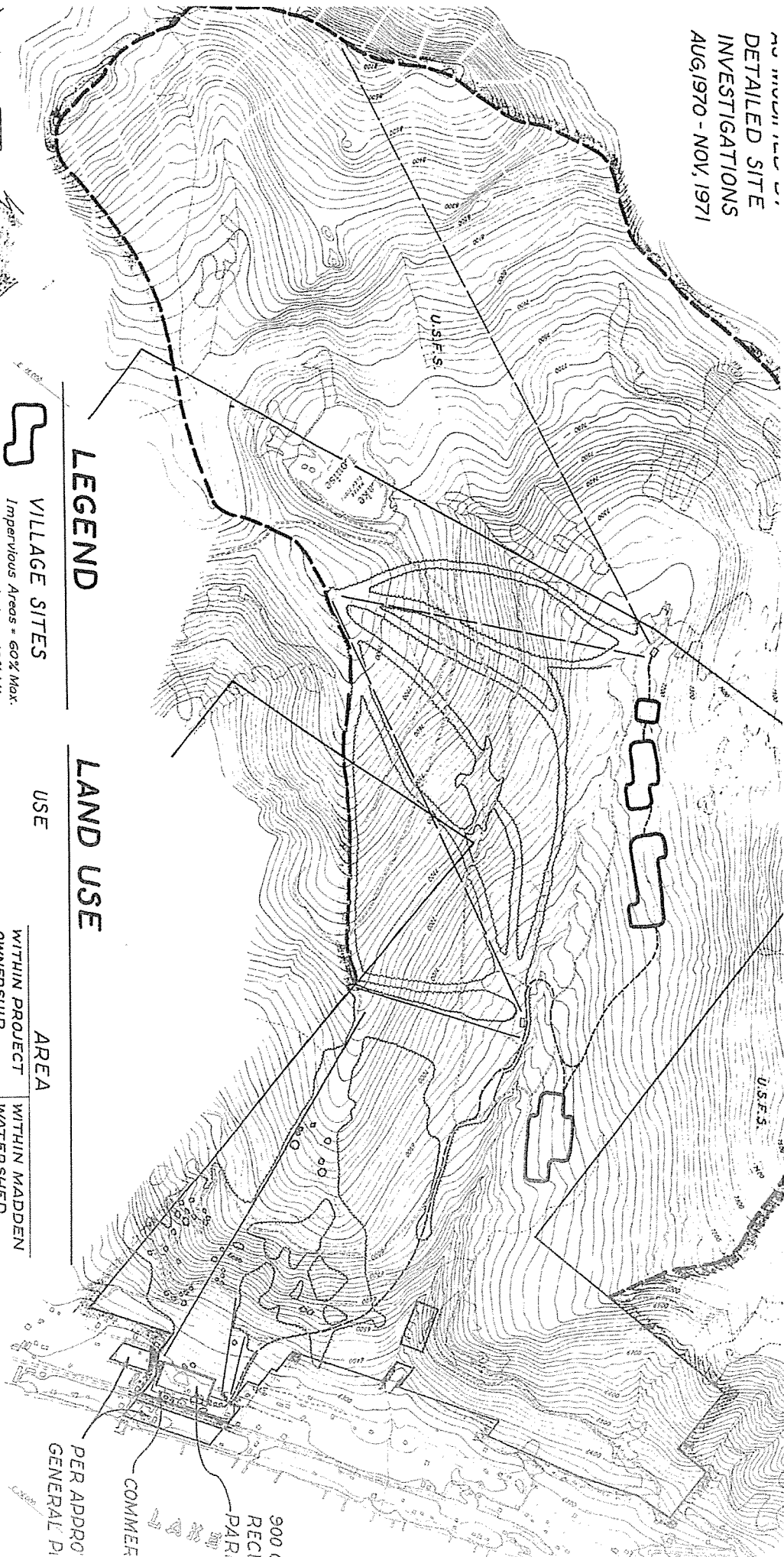
INQUIRY #: 3006063.2

YEAR: 1962

| = 1000'



Obtained from
Environmental Data
Resources, Inc.



LEGEND



VILLAGE SITES
 Impervious Areas = 60% Max.
 Cleared, Planted = 40% Min.



MONORAIL
 Required Clear Width = 15 Ft.



SKI RUNS



EXISTING SKI LIFTS

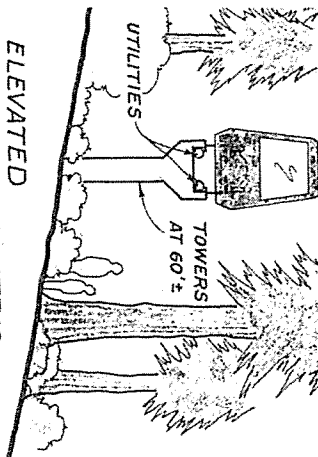


PLANNED SKI LIFTS



OPEN - NATIVE

**ELEVATED
 MONORAIL - ELECTRIC**



LAND USE

USE

AREA

WITHIN PROJECT OWNERSHIP	WITHIN MADDEN WATERSHED
--------------------------	-------------------------

ACRES	% TOTAL	ACRES	% TOTAL
-------	---------	-------	---------

IMPERVIOUS					
Residential	10.5	1.0 %	9.0	6.7 %	
Parking, Commercial	4.5	0.5	0	0	
Subtotal	15.0	1.5 %	9.0	0.7 %	
CLEARED, PLANTED					
Existing Runs	88.0	8.8 %	88.0	6.7 %	
Planned Runs	57.0	5.7	57.0	4.3	
Monorail	2.0	0.2	2.0	1.5	
Subtotal	147.0	14.7 %	147.0	12.5 %	
OPEN SPACE	838.0 ±	83.8 %	1,162.0	86.8 %	
TOTAL	1,000.0 ±	100.0 %	1,318.0	100.0 %	

PER APPRO
 GENERAL PL

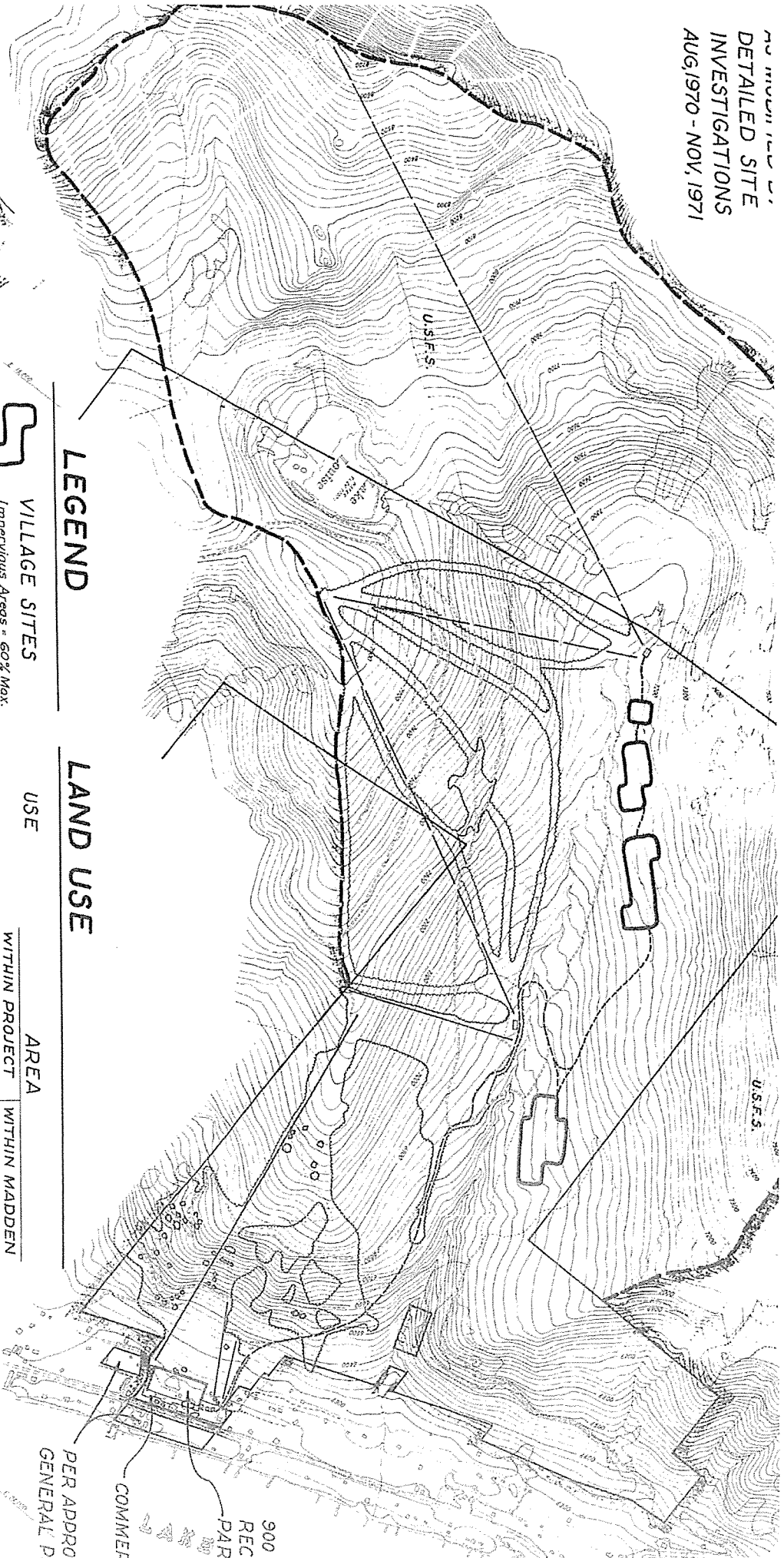
COMMER

900 (RECI
 PAR)

EARL G. HAGADORN
 CONSULTING CIVIL E
 RAYMOND VAIL & ASS
 ENGINEERS, PLANNI
 VICTOR L. WRIGHT
 CONSULTING ENGINE
 ERNEST WERTHEIM
 LANDSCAPE ARCHIT

Attachment 2

NO. 1000
 DETAILED SITE
 INVESTIGATIONS
 AUG. 1970 - NOV. 1971



LEGEND

VILLAGE SITES
 Impervious Areas = 60% Max.
 Cleared, Planted = 40% Min.

MONORAIL
 Required Clear Width = 15 Ft.

SKI RUNS

EXISTING SKI LIFTS

PLANNED SKI LIFTS

OPEN - NATIVE

TOWERS
 AT 60' ±

UTILITIES

ELEVATED
 MONORAIL - ELECTRIC

LAND USE

USE	AREA	
	WITHIN PROJECT OWNERSHIP	WITHIN MADDEN WATERSHED
	ACRES % TOTAL	ACRES % TOTAL
IMPERVIOUS		
Residential	10.5 1.0 %	9.0 0.7 %
Parking, Commercial	4.5 0.5	0 0
Subtotal	15.0 1.5 %	9.0 0.7 %
CLEARED, PLANTED		
Existing Runs	88.0 8.8 %	88.0 6.7 %
Planned Runs	57.0 5.7	57.0 4.3
Monorail	2.0 0.2	2.0 1.5
Subtotal	147.0 14.7 %	147.0 12.5 %
OPEN SPACE	838.0 ± 83.8 %	1,162.0 86.8 %
TOTAL	1,000.0 ± 100.0 %	1,318.0 100.0 %

EARL G. HAGADORA
 CONSULTING CIVIL ENGINEER
 RAYMOND VAIL & ASS
 ENGINEERS, PLANNING
 VICTOR L. WRIGHT
 CONSULTING ENGINEER
 ERNEST WERTHEIM
 LANDSCAPE ARCHITECT

Tom Brohard, PE

- Licenses:** 1975 / Professional Engineer / California – Civil, No. 24577
 1977 / Professional Engineer / California – Traffic, No. 724
 2006 / Professional Engineer / Hawaii – Civil, No. 12321
- Education:** 1969 / BSE / Civil Engineering / Duke University
- Experience:** 40 Years
- Memberships:** 1977 / Institute of Transportation Engineers – Fellow, Life
 1978 / Orange County Traffic Engineers Council - Chair 1982-1983
 1981 / American Public Works Association - Member

Tom is a recognized expert in the field of traffic engineering and transportation planning. His background also includes responsibility for leading and managing the delivery of various contract services to numerous cities in Southern California.

Tom has extensive experience in providing transportation planning and traffic engineering services to public agencies. Since May 2005, he has served as Consulting City Traffic Engineer three days a week to the City of Indio. He also currently provides "on call" Traffic and Transportation Engineer services to the Cities of Big Bear Lake and San Fernando. In addition to conducting traffic engineering investigations for Los Angeles County from 1972 to 1978, he has previously served as City Traffic Engineer in the following communities:

- o Bellflower..... 1997 - 1998
- o Bell Gardens..... 1982 - 1995
- o Huntington Beach..... 1998 - 2004
- o Lawndale..... 1973 - 1978
- o Los Alamitos..... 1981 - 1982
- o Oceanside..... 1981 - 1982
- o Paramount..... 1982 - 1988
- o Rancho Palos Verdes..... 1973 - 1978
- o Rolling Hills..... 1973 - 1978, 1985 - 1993
- o Rolling Hills Estates..... 1973 - 1978, 1984 - 1991
- o San Marcos..... 1981
- o Santa Ana..... 1978 - 1981
- o Westlake Village..... 1983 - 1994

During these assignments, Tom has supervised City staff and directed other consultants including traffic engineers and transportation planners, traffic signal and street lighting personnel, and signing, striping, and marking crews. He has secured over \$5 million in grant funding for various improvements. He has managed and directed many traffic and transportation studies and projects. While serving these communities, he has personally conducted investigations of hundreds of citizen requests for various traffic control devices. Tom has also successfully presented numerous engineering reports at City Council, Planning Commission, and Traffic Commission meetings in these and other municipalities.

In his service to the City of Indio since May 2005, Tom has accomplished the following:

- ❖ Oversaw preparation and adoption of the Circulation Element Update of the General Plan including development of Year 2035 buildout traffic volumes, revised and simplified arterial roadway cross sections, and reduction in acceptable Level of Service criteria under certain constraints
- ❖ Oversaw preparation of fact sheets/design exceptions to reduce shoulder widths on Jackson Street over I-10 as well as justifications for protected-permissive left turn phasing at I-10 on-ramps, the first such installation in Caltrans District 8 in Riverside County; oversaw preparation of plans and provided assistance during construction of a \$1.5 million project to install traffic signals and widen three of four ramps at the I-10/Jackson Street Interchange under a Caltrans encroachment permit issued under the Streamlined Permit Process
- ❖ Oversaw preparation of fact sheets/design exceptions to reduce shoulder widths on Monroe Street over I-10 as well as striping plans to install left turn lanes on Monroe Street at the I-10 Interchange under a Caltrans encroachment permit
- ❖ Oversaw preparation of traffic impact analyses for Project Study Reports evaluating different alternatives for buildout improvement of the I-10/Monroe Street and the I-10/Golf Center Parkway Interchanges
- ❖ Oversaw preparation of plans, specifications, and contract documents and provided assistance during construction of 22 new traffic signal installations
- ❖ Oversaw preparation of plans and provided assistance during construction for the conversion of two traffic signals from fully protected left turn phasing to protected-permissive left turn-phasing with flashing yellow arrows
- ❖ Reviewed and approved over 450 work area traffic control plans as well as signing and striping plans for all City and developer funded roadway improvement projects
- ❖ Oversaw preparation of a City wide traffic safety study of conditions at all schools
- ❖ Prepared over 350 work orders directing City forces to install, modify, and/or remove traffic signs, pavement and curb markings, and roadway striping
- ❖ Oversaw preparation of engineering and traffic surveys to establish enforceable speed limits on over 125 street segments
- ❖ Reviewed and approved traffic impact studies prepared for more than 16 major development projects

Since forming Tom Brohard and Associates in 2000, Tom has reviewed many traffic impact reports and environmental documents for various development projects. He has provided expert witness services and also prepared traffic studies for public agencies and private sector clients.

13a-C

Tom Brohard and Associates

©

April 18, 2011

Michael R. Lozeau, Attorney at Law
Lozeau | Drury LLP
410 12th Street, Suite 250
Oakland, California 94607

SUBJECT: Review of the Draft Environmental Impact Report/Statement (Draft EIR/EIS) for the Homewood Mountain Resort Ski Area Master Plan Project in Placer County – Traffic and Parking Issues

Dear Mr. Lozeau:

Tom Brohard, P.E., has reviewed Chapter 3.0 (Project Description), Chapter 11.0 (Transportation and Circulation), and other portions of the January 21, 2011 Draft Environmental Impact Report/Statement (Draft EIR/EIS) for the Homewood Mountain Resort Ski Area Master Plan Project in Placer County (Proposed Project) prepared by Hauge Brueck Associates. Other documents including Draft EIR/EIS Appendix J (Traffic Counts) and Appendix K-3 (January 12 2011 Parking Study prepared by LSC Transportation Consultants) have also been reviewed.

Further study must be undertaken to properly identify the traffic and parking impacts of the Proposed Project. As discussed throughout this letter, the Draft EIR/EIS contains major technical errors in its traffic and parking analyses of the Proposed Project.

Until the various issues and concerns raised in this letter are addressed, there is "substantial evidence" that the Proposed Project will have adverse traffic and parking impacts that have not been properly disclosed, analyzed, and mitigated. Accordingly, the Draft EIR/EIS for the Homewood Mountain Resort Ski Area Master Plan Project in Placer County must be revised and recirculated.

Education and Experience

Since receiving a Bachelor of Science in Engineering from Duke University in Durham, North Carolina in 1969, I have gained over 40 years of professional engineering experience. I am licensed as a Professional Civil Engineer both in California and Hawaii and as a Professional Traffic Engineer in California. I formed Tom Brohard and Associates in 2000 and now serve as the City Traffic Engineer for the City of Indio and as Consulting Transportation Engineer for the Cities of Big Bear Lake, Mission Viejo, and San Fernando. I have extensive experience in traffic engineering and transportation planning. During my career in both the public and private sectors, I have reviewed numerous environmental documents and traffic studies for many projects. Several recent assignments are highlighted in the enclosed resume.

81905 Mountain View Lane, La Quinta, California 92253-7611
Phone (760) 398-8885 Fax (760) 398-8897
Email tbrohard@earthlink.net

Mr. Michael R. Lozeau
Homewood Mountain Resort Project EIR/EIS – Traffic and Parking Issues
April 18, 2011

Traffic Issues

Based on the information provided in the Draft EIR/EIS for the Homewood Mountain Resort Ski Area Master Plan Project in Placer County, my review indicates the following errors and flaws in the traffic analyses:

- 1) Baseline Traffic Counts May Not Reflect True Peak Hour – As provided in Appendix J, the baseline traffic counts for the Draft EIR/EIS were conducted between 3 PM and 6 PM on Fridays including August 22, 2008, August 29, 2008, and September 5, 2008. The highest Friday afternoon hourly volumes obtained from these traffic counts were then used throughout the traffic analyses for the Proposed Project.

The Draft EIR/EIS has not captured the higher traffic volumes associated with weekend traffic during early August when most families take vacation before their children return to school in late August. Traffic volumes during the first two weekends in August would therefore be higher than those gathered for the Draft EIR/EIS in late August/early September. Additional traffic counts must be taken on weekends in early August at the study intersections and compared against those collected in late August/early September. If the counts in early August are higher, then the Draft EIR/EIS must reevaluate traffic forecasts for the Proposed Project together with the higher baseline volumes.

In addition to the seasonal variation discussed above, traffic volumes during midday on Saturdays in the summer are likely to be higher than the Friday afternoon peak hour. From my experience in serving as City Traffic Engineer since 2006 for Big Bear Lake (a mountain resort community), most visitors arrive over an extended period of time on Fridays. The weekend peak hour traffic volumes during midday on Saturdays are typically higher than on Friday afternoons.

Additional traffic counts must be taken on weekends in early August at the study intersections to identify the highest traffic volume peak hour (Friday afternoon or Saturday midday). If midday Saturday volumes are higher than Friday afternoon counts in early August, then the Draft EIR/EIS must evaluate and analyze the higher baseline traffic volumes. Saturday midday peak hour trip generation rates and forecasts for the resort would then be added and analyzed to properly evaluate and mitigate resulting significant traffic impacts (see Trip Generation comments below).

- 2) Omissions from the Draft EIR/EIS – In comparison with the Environmental Checklists referenced beginning on Page 11-18 of the Draft EIR/EIS, there are omissions from analyses as follows:

Mr. Michael R. Lozeau

**Homewood Mountain Resort Project EIR/EIS – Traffic and Parking Issues
April 18, 2011**

- a) TRPA Checklist - Hazards to Motor Vehicles, Bicyclists and Pedestrians – The Proposed Project will significantly increase vehicle traffic on Fawn Street, Silver Street, and SR89. A number of resort guests will walk, ride bicycles, or drive across SR89 to use the recreational facilities at the Lake including the Homewood Marina, the water taxi dock, and the West Shore Café restaurant on the east side of SR89. The Draft EIR/EIS must analyze and evaluate if traffic signals are warranted to provide safe passage across SR89 back and forth between the Resort and the recreational, transportation, and restaurant facilities on the Lake.
- b) CEQA Checklist – Emergency Access – The Proposed Project is expected to significantly increase the number of people at the Resort in the summer. In the event of a major emergency such as a wild fire requiring evacuation, people will attempt to flee in their private automobiles, causing considerable congestion. The Draft EIR/EIS should require preparation and periodic review of an adequate evacuation plan for the Resort.
- 3) Building B Trip Generation Rates Do Not Match the Project Description – As indicated by the name (Homewood Mountain Resort Ski Area) and throughout the Description in Chapter 3, the Proposed Project is planned as a resort. In describing the proposed hotel and other residential units in Building B, Page 3-18 of the Draft EIR/EIS states “The 75-room, five-star boutique-style hotel will feature resort amenities that are expected to include full service restaurant, spa and fitness facility.” Building B will also include 40 two-bedroom, two-bath condominium/hotel units (up to 20 with one-room lock offs) and 30 individually owned penthouse condominium units. The description of Building B concludes that “The condominium/hotel units and penthouse condominium units will be individually owned and owners will be offered full hotel services.”

Trip generation rates for traffic studies of proposed projects in the Lake Tahoe area are published by TRPA, the Tahoe Regional Planning Agency. Their Trip Table is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 7th Edition. Trip rates listed by TRPA include daily trips per hotel unit and daily trips per resort hotel unit.

ITE defines “Hotels” (Land Use 310) as “...places of lodging that provide sleeping accommodations and supporting facilities such as restaurants; cocktail lounges; meeting and banquet rooms or convention facilities; limited recreational facilities (pool, fitness room); and/or other retail and service shops.” ITE defines “Resort Hotels” (Land Use 330) as “...similar to hotels in that they provide sleeping accommodations, restaurants, cocktail lounges, retail shops and guest services. The primary difference is that resort hotels cater to the tourist and vacation industry, often providing a wide variety of recreational facilities/programs (golf course, tennis courts, beach access, or

other amenities) rather than convention and meeting business. Resort hotels are normally located in suburban or outlying locations on larger sites than conventional hotels.”

From the Project Description, all hotel rooms, condominium/hotel units, and penthouse condominium units in Building B must utilize the Resort Hotel trip rate. Rates for each occupied resort hotel room are 13.43 Saturday daily trips and 1.23 Saturday midday peak hour trips. These rates are significantly higher than the weekday daily and PM peak hour rates used by the Draft EIR/EIS including 8.92 daily and 0.70 PM peak hour trips for the hotel and hotel/condo units as well as the 5.86 daily and 0.52 PM peak hour trips for the penthouse condominiums.

- 4) Additional Building B Saturday Trips Will Likely Create More Traffic Impacts - In its calculation of weekday daily and PM peak hour trips for Building B, the Draft EIR/EIS assumed that 50 percent of the lodging guests arrive on Friday and it used 1.5 daily and 0.75 PM peak hour trips as the rate for half of each type of unit in Building B. The Draft EIR forecast Building B will generate 811 daily and 117 PM peak hour trips on a Friday in late August/early September.

For trip generation at the resort hotel rate on a Saturday with all rooms occupied, 165 units in Building B would generate 2,216 Saturday daily trips including 203 Saturday midday peak hour trips. Adding these trips that are 75 percent higher than forecast in the Draft EIR/EIS to the increased Saturday midday peak hour baseline volumes during the first two weeks of August will likely create additional significant traffic impacts that must be identified, evaluated, analyzed, and mitigated.

- 5) Other Intersections May Experience Significant Traffic Impacts – According to Table 11-8 on Page 11-24 of the Draft EIR/EIS, an intersection experiences a significant traffic impact if the Level of Service (LOS) deteriorates to LOS E for more than four hours during peak travel periods or to LOS F. Mitigation of significant traffic impacts is then required. Based on the analyses in the Draft EIR/EIS for the Friday PM peak hour using the late August/early September baseline, several other intersections may experience significant traffic impacts under various scenarios as follows:

- a) Existing plus Project Scenario - Table 11-22 on Page 11-72 of the Draft EIR/EIS reports LOS and delay during winter for Existing and Existing plus Project Conditions. At the intersection of SR89/Fawn Street, the LOS for traffic on Fawn Street deteriorates from LOS C to LOS E. While Footnote 3 is missing from this table, Footnote 3 in other similar tables in the Draft EIR/EIS indicates “The analysis period represents the absolute peak hour. The LOS E condition is not expected to exceed 4 hours of the day and therefore is not considered to be a significant impact.”

No data, analysis, or calculations are provided by the Draft EIR/EIS to affirm that the LOS E condition will last only four hours or less. If LOS E lasts more than four hours, then this intersection is significantly impacted during winter for existing plus project conditions and mitigation is required. The Draft EIR/EIS must analyze LOS conditions during other hours to support its conclusion of no significant impact at SR89/Fawn Street.

- b) Cumulative plus Project Scenario - Table 11-26 on Page 11-88 of the Draft EIR/EIS reports LOS and delay during summer for Cumulative and Cumulative plus Project Conditions. At the intersections of SR89/Ski Bowl Way and SR89/Pine Street, the LOS for traffic on Ski Bowl Way and on Pine Street deteriorates from LOS D to LOS E. Footnote 3 to this table in the Draft EIR/EIS indicates "The analysis period represents the absolute peak hour. The LOS E condition is not expected to exceed 4 hours of the day and therefore is not considered to be a significant impact."

No data, analysis, or calculations are provided by the Draft EIR/EIS to affirm that the LOS E condition will last only four hours or less. If LOS E lasts more than four hours, then this intersection is significantly impacted during winter for existing plus project conditions and mitigation is required. The Draft EIR/EIS must analyze LOS conditions during other hours to support its conclusion of no significant impact at SR89/Ski Bowl Way and SR89/Pine Street.

- 6) SR89/Fawn Street Traffic Mitigation Measure Is Incomplete – Table 11-28 on Page 11-98 of the Draft EIR/EIS reports LOS and delay during winter for Cumulative and Cumulative plus Project Conditions. At the intersection of SR89/Fawn Street, the LOS for traffic on Fawn Street deteriorates from LOS D to LOS F, a significant traffic impact. Page 11-104 of the Draft EIR/EIS requires that the project add a 100 foot long left turn pocket on Fawn Street. From review of the plans for the Proposed Project in Figure 3-8 on Page 3-23, Fawn Street is proposed to be only 27 feet wide between the outside curbs, an insufficient width to provide three 12 foot wide travel lanes. The mitigation measure must be clarified to require widening of the Fawn Street approach to SR89 to at least 36 feet between curbs. Based on the traffic forecasts, the left turn lane should also be lengthened to at least 165 feet.

As previously indicated, a number of resort guests will walk, ride bicycles, or drive across SR89 in the vicinity of Fawn Street to use the recreational facilities at the Lake including the Homewood Marina, the water taxi dock, and the West Shore Café restaurant on the east side of SR89. The Draft EIR/EIS must analyze and evaluate if traffic signals are necessary to provide safe passage across SR89 back and forth between the resort and the recreational, transportation, and restaurant facilities on the Lake. With a posted Speed Limit of 35 MPH on SR89 in this area, it is likely that the critical (85th

Mr. Michael R. Lozeau
Homewood Mountain Resort Project EIR/EIS – Traffic and Parking Issues
April 18, 2011

percentile) speed on SR89 exceeds 40 MPH. Under those higher speed conditions, the volumes needed to warrant a traffic signal are only 70 percent of the values used for slower speeds. In addition to the widening of Fawn Street, the Draft EIR/EIS must evaluate the need for a traffic signal at this intersection to reduce delay, improve LOS, and provide a safe, controlled crossing for pedestrians and bicyclists.

Parking Issues

Based on the information provided in the Draft EIR/EIS and the Parking Study for the Homewood Mountain Resort Ski Area Master Plan Project in Placer County, my review indicates the following errors and flaws in the parking analyses:

- 1) Conflicts with Project Description – There are a number of conflicts between Page 2 of the Parking Study and the description of the Proposed Project on Page 3-18 in the Draft EIR/EIS including:
 - a) The Parking Study indicates there are 221 housing units including 20 lock-off units whereas the Draft EIR/EIS shows 201 housing units including the 20 lock-off units at North Base.
 - b) The Parking Study indicates 15,000 square feet of community commercial with 10,000 square feet at Mid-Mountain whereas the Draft EIR/EIS shows 25,000 square feet of community commercial at North Base, a portion of which may be at Mid-Mountain. Page 9 of the Parking Study assumes the additional 10,000 square feet of commercial use (which is not guaranteed to be at Mid-Mountain) requires no additional parking.
 - c) The Parking Study assumes 770 parking spaces whereas Draft EIR/EIS indicates 729 parking spaces with potentially up to 770 parking spaces at North Base.
 - d) The Parking Study assumes 150 parking spaces for South Base whereas Draft EIR/EIS indicates 117 parking spaces with up to 150 parking spaces “ultimately provided”.
- 2) Errors in the Parking Study (Winter) – There are several errors in the Parking Study for winter including:
 - a) The Parking Study Demand Analysis units in Table 1 do not match up with Winter Trip Generation units in Table 11-13 (residential units, shopping center, accessory uses at hotel, etc.)

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- b) The Parking Study Table 1 indicates Mid-Mountain facility generates parking demand only in summer.
 - c) Table 11-13 indicates the Fitness Center/Spa will be 10,590 square feet. Table 1 in the Parking Study does not assume any employees in the Fitness Center/Spa or related employee parking.
 - d) Page 5 of the Parking Study assumes there will not be a “local” event at the hotel such as a service club meeting on a day of peak hotel occupancy. No mitigation measures are proposed to preclude this from occurring and further compounding the parking deficiencies.
 - e) Page 9 of the Parking Study assumes 40 percent of the community retail trips are “internal” to the resort and reduces the parking to be provided by that percentage. Table 11-13 assumes only 30 percent of the trips generated by the resort are “internal”.
 - f) Page 9 of the Parking Study indicates only 62 parking spaces will be required on site to accommodate 193 peak time employees. The reductions include an assumption that 25 percent of these employees will use transit, a very high and unsupported percentage, whereas none of the hotel employees will use transit.
 - g) Page 9 of the Parking Study indicates there will be parking for 400 day skiers. Page 3 indicates the current operation (with all day skiers) generates a maximum of 942 parked vehicles on site plus an additional unspecified number of vehicles parked on the adjacent streets and on SR89. How will the project limit the number of parking spaces for day skiers to a maximum of 400?
 - h) Table 2 on Page 11 assumes the 62 ski employee parking spaces will be provided elsewhere during peak ski weekends. Page 11-60 of the Draft EIR/EIS states a plan will be developed and further environmental review will be needed. Developing a plan in the future for off-site ski employee parking defers mitigation. The generalities mentioned on Page 10 of the Parking Study do not constitute a plan for off-site ski employee parking.
 - i) Table 2 on Page 11 shows a parking supply of 770 spaces at North Base when only 729 are actually proposed (see above). Even if 50 guests go elsewhere to ski and even if 62 employees park elsewhere off site, North Base would be short 21 parking spaces rather than having a surplus of 20 spaces shown in Table 2.
- 3) Incomplete Parking Study (Summer) - The Parking Study for summer is incomplete as follows:

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- a) The Parking Study continues to assume 770 spaces will be provided at North Base rather than 729. Boat trailer parking can be expected to occupy a number of the remaining 296 parking spaces. How will the boat trailers be removed to provide a portion of the parking needed for concert events?
 - b) In addition to the parking of boat trailers in the resort parking lots during the summer, additional boat trailers park on both sides of SR89 as well as on both sides of the local streets. If parking on SR89 and the side streets is either eliminated entirely or restricted by time limits, additional demand for boat trailer parking in the resort parking lots will be created. How will the boat trailers be removed to provide a portion of the parking needed for concert events?
 - c) Page 15 of the Parking Study concludes that 253 vehicles (actually 294 vehicles based on 729 spaces) would need to be parked elsewhere during concerts. The Parking Study does not present any plans or programs to deal with the parking shortage during the 3 to 5 relatively large events during the summer.
- 4) Other Issues Not Addressed – There are several unaddressed issues relating to parking as follows:
- a) The Proposed Project proposes to limit parking on site to only 400 day skiers. How will day skiers be directed to the 244 parking spaces in the parking structure and 156 parking spaces in the underground structure?
 - b) How will the project accommodate the day skier parking demand and eliminate parking on the adjacent streets and on SR89?
 - c) Page 3-18 of the Draft EIR/EIS indicates the 410 underground parking spaces below Buildings A and B will include “valet stacked and single parking spaces”. From Table 2 on Page 11 of the Parking Study, there will be a parking demand for 432 spaces underground including 156 day skiers. How will the parking demand and day skier parking be managed – valet or self park?
 - d) Accepted practice indicates parking demand should not exceed 90 percent of the parking supply so that traffic congestion does not result by driving around to find the last few available parking spaces. Contrary to accepted practice, parking demand exceeds the parking supply for the Proposed Project. What parking management systems will be employed to maximize the use of the parking provided?

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- e) Additional parking spaces on site will be needed to accommodate shuttle busses and resort service vehicles. Where will this parking be provided?
- f) The Proposed Project should provide personnel to discourage illegal parking on adjacent streets and monitor violations of the proposed two hour time limited parking. Violators should be towed away.

As discussed throughout this letter, there is "substantial evidence" that the Homewood Mountain Resort Ski Area Master Plan Project in Placer County will have adverse traffic and parking impacts that have not been properly disclosed, analyzed, and mitigated in the Draft EIR/EIS. A Recirculated Draft EIR/EIS must be prepared to address the issues and concerns raised in this letter and those expressed by others. If you have any questions regarding these comments, please call me at your convenience.

Respectfully submitted,

Tom Brohard and Associates

Tom Brohard

Tom Brohard, PE
Principal

Enclosure

